

IN THE CLAIMS

Please amend the claims as follows:

1. (Cancelled).

2. (Currently Amended) ~~The spatio-temporal filter unit as~~
~~claimed in Claim 1A~~ spatio-temporal filter unit comprising a sigma
filter for reducing noise in images, characterized in that the
sigma filter comprises one filter kernel for operating on pixels
5 from both a current image and from an output of the spatio-temporal
filter unit, said output supplying a temporally recursive filtered
image, characterized in that said spatio-temporal filter unit
further comprises:

a spatial pixel buffer for storing pixels of the current
10 image as supplied to the spatio-temporal filter unit;

a spatial pixel selector for selecting pixels from the
spatial pixel buffer;

a temporal pixel buffer for buffering pixels from the
output of the spatio-temporal filter unit; and

15 a temporal pixel selector for selecting pixels from the
temporal pixel buffer,

wherein the sigma filter is coupled to an output of said spatial
pixel selector and to an output of said temporal pixel selection,

said one filter kernel operating on the pixels from both the
20 spatial pixel selector and the temporal pixel selector.

3. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 2, characterized in that the sigma filter comprises an adaptive sigma filter.

4. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 3, characterized in that an aperture of at least one of the temporal pixel selector and the spatial pixel selector is adjustable.

5. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 4, characterized in that at least one of the temporal pixel selector and the spatial pixel selector is designed such that a distance between the selected pixels is adjustable.

6. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 4, characterized in that said spatio-temporal filter unit further comprises a motion detector for detecting motion, said motion detector controlling the aperture of the
5 temporal pixel selector based on the detected motion.

7. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 4, characterized in that said spatio-temporal

filter unit further comprises a motion estimator for supplying motion vectors, said motion estimator controlling a position of the temporal pixel selector relative to the temporal pixel buffer based on the motion vectors.

8. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 4, characterized in that said spatio-temporal filter unit further comprises a noise estimator for estimating a noise level in the current image, said noise estimator controlling the aperture of at least one of the temporal pixel selector and the spatial pixel selector based on the estimated noise level.

9. (Previously Presented) The spatio-temporal filter unit as claimed in Claim 4, characterized in that said spatio-temporal filter unit further comprises a noise estimator for estimating a noise level in the current image, said noise estimator controlling thresholds of the adaptive sigma filter based on the estimated noise level.

10. (Cancelled).

11. (Previously Presented) An image display apparatus comprising:
receiving means for receiving a signal representing images;
a display device for displaying the images; and

5 a spatio-temporal filter unit comprising a sigma filter for reducing in the images, characterized in that said spatio-temporal filter unit further comprises:

a spatial pixel buffer for storing pixels of a current image as supplied to the spatio-temporal filter unit;

10 a spatial pixel selector for selecting pixels from the spatial pixel buffer;

a temporal pixel buffer for buffering pixels from the output of the spatio-temporal filter unit, said output supplying a temporally recursive filtered image; and

15 a temporal pixel selector for selecting pixels from the temporal pixel buffer,

wherein the sigma filter is an adaptive sigma filter and is coupled to an output of said spatial pixel selector and an output of said temporal pixel selector, said sigma filter comprising one filter

20 kernel for operating on the pixels from both the spatial pixel selector and the temporal pixel selector.